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THE CAUSES OF AIR POLLUTION PROVED THROUGH THE LIVE STATISTICS FROM MICROORGANISMS

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PROVED THROUGH THE LIVE STATISTICS FROM MICROORGANISMS

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by

H. Kauf

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As a result of the different lectures of the Symposium concerning the necessity of hygenic air, and the preservation of the atmosphere arose- which was why I attended the working groups of Aerosole in medicine and biology- of course, the first point to be discussed was the prevention of air pollution, which originated by the multiplicity of the industrial process, especially in the burning of coal. This kind of air pollution, of course, is the most natural sight which we behold with our eyes, but we need only to think about all those columns of smoke pouring out of the industrial chimneys-. That is one of the most important pollution problems to fight.

Compared to the problem mentioned above, all other air pollution causing sources are relegated to the background, although they can become very important locally. A long line of components of atmospheric aerosols, perceptible and even harmful, odor causing elements are, although mostly the indirect consequence of industry and overpopulated

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areas, are formed as the direct result of the activities of micro-organisms. The microorganisms just don't need organic wastes; any type of backwater, or waste product can be used by them as a breeding ground.

What problems an unaerated muddy pond can cause, is well known by the experts. Large volumes of sulphuretted hydrogen in the immediate area often endanger the purity of the air. A series of bacteria oxidizes,for example, under certain conditions, to carburet with the combined oxygen of the water soluble sulphate. Thus, along the way of desulphurication, sulphuretted hydrogen is created. Other types of bacteria, on principal, follow a similar path, that of denitrification, in which the oxygen bound to the nitrates is worked upon. Consequently, tracable amounts of nitrous oxides, and even laughing gas, can pour out from the muddy pond. It would be easy to present further products of reduction reactions.

I just wanted to call your attention , in your efforts to keep the air pure, also, to this complex set of questions. The above touched upon problems concerning air cleanliness are, in my opinion, to be compared to the problems of a many faceted chemical production factory of today.

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